

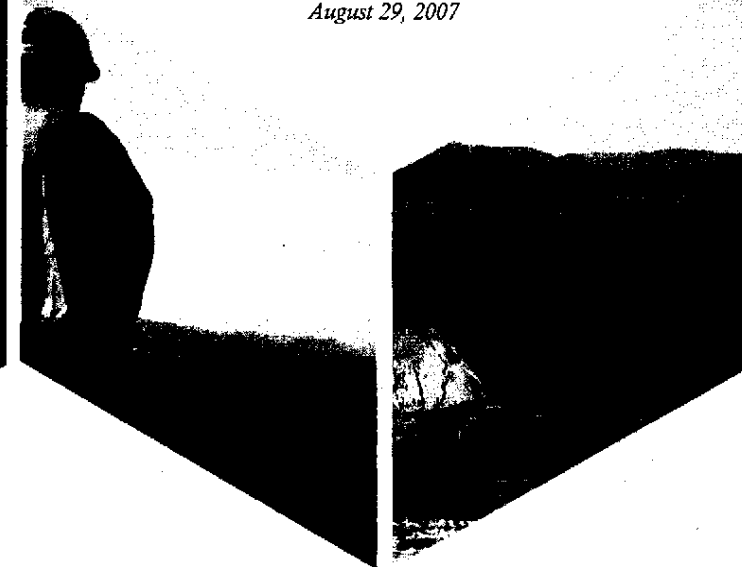
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Engineering Report for Soil Transload Facility Building Improvements 5800 West Side Avenue North Bergen, New Jersey

Prepared for:

MHF Logistical Solutions

August 29, 2007



78 Cypress Road, Suite 5 • Goshen, NY 10924

Building lifetime relationships with our clients and employees

**ENGINEERING REPORT
FOR
SOIL TRANSLOAD FACILITY
BUILDING IMPROVEMENTS
5800 WEST SIDE AVENUE
NORTH BERGEN, NEW JERSEY**

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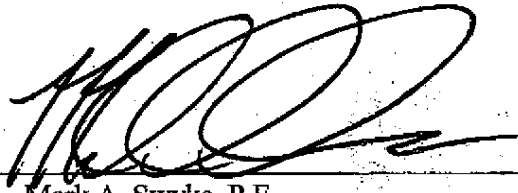
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Project 70159

**Engineering Report for
Soil Transload Facility Building Improvements
5800 West Side Avenue
North Bergen, New Jersey**

The material and data in this report were prepared under the supervision and direction of the undersigned.

Cornerstone Environmental Group, LLC

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Mark A. Swyka, P.E.
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Andrew C. Schellberg
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1 INTRODUCTION

MHF Logistical Solutions, Inc. ("MHF"), utilizes the soil transload facility located at 5800 West Side Avenue in North Bergen, County of Hudson, New Jersey for the transloading of soils in support of their existing materials management and disposal operations. The transload facility is currently owned and operated by the New York, Susquehanna and Western Railroad (the Railroad). A site location map is shown on Figure 1.

The transload facility is located within the New Jersey Meadowland District (NJMD). The parcel is zoned Intermodal A (IA). A NJMD Zoning Map is shown on Figure 2. Table 1 summarizes the zoning requirements for this zone along with the dimensions provided for this project. Further, zoning requirements for adjacent zoning districts located within 300 feet of the property are also shown on Table 1. The only variance needed for this project is for the rear yard setback, all other zoning requirements can be met for this project. Table 2 presents the open space requirements set forth by the NJMD. The open space requirements include planting requirements and buffer zones all of which can be met at this facility.

The existing facility consists of a truck ramp for tipping of soil loads from dump truck or dump trailer into gondola cars and a building through which the gondola cars pass during transloading operations. As part of the facility upgrade, the existing facility will be modified. This engineering design report describes modifications and enhancements that will be made to the transload building and transloading operations. These include:

1. Structural Enhancements

- a. Total Enclosure of the Delivery Vehicle -- MHF will construct an extension to the west of the existing transload building which will completely cover both the tipping portion of the ramp and the delivery vehicle while it tips its load into the railcar. The building extension will be equipped with a high-speed roll-up door that will be closed during tipping operations.
- b. Total Enclosure of Railcar Loading Operations -- MHF will construct an extension to the north of the existing transload building which will completely cover the full length of one railcar in all positions as it is loaded from the delivery vehicles. In addition to the existing curtains the

proposed Railcar Loading Building will incorporate standard roll-up overhead doors at the railcar entrance and egress apertures.

2. Ventilation System Improvements

- a. Sequestering of Tipping Operations – MHF will install building walls and/or curtains between the tipping hopper and the remainder of the building covering the rail line in order to isolate the first, or rail story from the second story where the trucks tip. These walls and/or curtains will prevent uncontrolled distribution of dust throughout the building and will help channel dust through the tipping hopper to the ventilation system.
- b. Ventilation System – MHF will install a building ventilation system. The inlet to the ventilation system will be a hood directly over the existing tipping hopper as close to the source of airborne particulate generation as possible.
- c. Railcar Access – MHF will install additional barriers (roll-up doors, plastic curtains, and/or air curtains) within the building covering the rail line to contain and control facility air movement.

3. Rinse Water Management System Improvements

- a. Rinse Water Drain – MHF will install additional controls to collect and manage rinse water from the ramp and tipping hopper. To the extent possible, rinse water will be allowed to drain to the railcars to be absorbed by the transloaded soil prior to completing soil encapsulation with the liner.
- b. Rail Bed Improvement – MHF will improve the rail bed within the building.

Each of these modifications and enhancements will be described more fully in the following sections of this report.

2 BUILDING IMPROVEMENTS

2.1 Introduction

Building improvements will be made to further enhance the containment and control of potential dust that may be generated from transload operations. The following building modifications will be incorporated in the project.

2.2 Total Enclosure of the Delivery Vehicle

MHF will construct an extension to the west of the existing transload building which will completely cover both the tipping portion of the ramp and the delivery vehicle while it tips its load into the railcar. The proposed Delivery Vehicle Building will be a pre-engineered steel building matching the existing structure and will be placed on pile footings.

In order to accommodate a range of delivery vehicle sizes, the proposed Delivery Vehicle Building will be 30 feet wide, 60 feet long and 40 feet high above the floor of the tipping ramp. In addition, the height of the existing tipping ramp will be lowered 2 feet. A building of these dimensions is anticipated to be adequate to accept single unit dump trucks as well as dump trailers. The length of these vehicles will fit fully within the building and the height is intended to accommodate the truck as the box is tipped to its fully extended height.

The Delivery Vehicle Building will be equipped with a high-speed roll-up vehicle door. The high-speed roll-up door will be Model "HDT" as manufactured by TNR Industrial Doors, or approved equal. See Appendix A. This door will be opened to allow the delivery vehicle to back up the ramp and fully into the building. After the delivery vehicle backs into the unloading position, with the tail gate over the tipping hopper, the door will be closed. The door will remain closed during tipping operations. After the delivery vehicle has tipped, the door will be opened to allow the delivery vehicle to exit.

2.3 Total Enclosure of Railcar Loading Operations

MHF will construct an extension to the north of the existing transload building which will completely cover the full length of one railcar in all positions as it is loaded from the

delivery vehicles. The proposed Railcar Loadout Building will be a pre-engineered steel building matching the existing structure and will be placed on pile footings.

The proposed Railcar Loadout Building will be 30 feet wide, 72 feet long, and 27 feet above the height of the railhead. The box size of the gondola railcars used by MHF are 53.5 feet in length. They are slightly longer across the coupler faces. Considering the gondola railcar length, a building length of 72 feet will be adequate to completely cover the car before it enters the loading position. Gondola railcars will be lined within the proposed building with a PVC liner prior to filling with soil. Each end of the Railcar Loadout Building will, in addition to installed vinyl curtains, receive a standard roll-up door. These doors will be normally open during rail operations, but will be closed during non-operating periods for facility security. The doors will be Type FCM, Motor Operated Service Doors as manufactured by The Cookson Company or approved equal. Door specifications and can be found in Appendix A.

In addition, a new standard roll-up door will be installed at the opening located on the west side of the existing railcar building. This door is designed to provide access for a backhoe that will be used to level the soil in the railcar prior to the closure and sealing of the PVC railcar liner.

2.4 High Speed Roll-Up Door

MHF will install a 12-foot wide by 17-foot high high-speed roll-up door on the western side of the proposed Delivery Vehicle Building. The high-speed door will facilitate door opening and closing associated with delivery vehicles entering and exiting the building.

The high-speed roll-up door will allow the delivery vehicles access into the facility, while minimizing the time the facility is open to the environment. The door will be Model "HDT" Door System as manufactured by TNR Industrial Doors or approved equal. The door material is styrene butadiene rubber which will provide normal resiliency and flexibility at temperatures ranging from -40° F to 180° F. Further, the door has molded edges which maintains and holds the door in extreme windload conditions. The door opens at a speed of 30 inches per second. Refer to Appendix A for additional information on the high-speed roll-up door.

2.5 Drawings

Drawings of the existing and proposed conditions of the 5800 West Side Avenue facility have been prepared and are attached to this report. These drawings are described as follows:

Sheet 1 Existing Conditions Plan

This drawing illustrates the site with conditions as they currently exist, including the building footprint, parking areas, scale and scale house.

Sheet 2 Proposed Site Plan

This drawing shows proposed building modifications and facility improvements, including the revised traffic patterns and vehicle scale facilities.

Sheet 3 Proposed Transload Facility Modifications – Floor Plan

This drawing illustrates the floor plan of the facility, showing the existing building, proposed additions, including door openings, and rinse water and air management systems.

Sheet 4 Proposed Transload Facility Modifications – Elevations

This drawing shows the elevation views of each side of the facility, including the existing building, the proposed additions, door openings, and rinse water and air management systems.

3 AIR HANDLING SYSTEM

3.1 General

Existing facility modifications will include the installation of an air handling and filtration system. In order to enhance the effectiveness of the air handling and filtration system, additional building modifications will be made to both sequester portions of the building from the tipping operation and control air flow within the building. These modifications are discussed in the following sections.

3.2 Sequestering of Tipping Operations

In order to separate tipping operations from other sections of the building, as much as possible, partition walls and curtains will be installed. As the facility currently exists, the building over the tipping hopper is connected to the southern extension of the railcar building both above and below the level of the tipping hopper. In connection with these improvements, MHF will construct a partition wall above the level of tipping hopper to divide the building over the tipping hopper from the southern railcar building.

Below the level of the tipping hopper, MHF will install vinyl curtains both above and alongside the railcar. These walls and/or curtains will prevent uncontrolled distribution of dust throughout the building and will help channel dust in the area of the tipping hopper to the inlet to the air handling and filtration system.

3.3 Air Handling and Filtration System

MHF will install a building ventilation system which will handle the airborne particulates within the facility (Details and specifications on the building ventilation system are included in Appendix B). The inlet to the ventilation system will be a hood directly over the existing tipping hopper as close to the source of airborne particulate generation as possible.

The air handling system will consist of a series of filters, an air handling unit capable of achieving the design air flow for the facility of 24,000 cfm, and a collection dust removal system. The system incorporates equipment manufactured by both General Carbon Corporation (GCC) and American Air Filter (AAF). Figures 1 and 2 included in

Appendix B illustrate the flow cycle diagram of the proposed air handling system to be installed at MHF. As shown, one system can handle both contaminated soil and radioactive soil. Also, filtered particulates will be returned to the railcars.

With a design flow of 24,000 cfm, the air handling system exceeds the volume necessary to achieve 6 air changes per hour and satisfies the requirements for a permanent total enclosure.

3.4 Railcar Access

As mentioned in Section 2 above, MHF proposes to install additional barriers, including roll-up doors, high-speed roll-up doors, plastic curtains, and/or air curtains within the building covering the rail line to contain and control facility air movement. These improvements will result in a completely enclosed operation at this facility.

4 RINSE WATER MANAGEMENT

4.1 Rinse Water Drain

The tipping portion of the existing facility is rinsed with water as a component of routine housekeeping. The existing tipping hopper and ramp are rinsed to clear the area of dirt and dust that may have accumulated during a shift.

The tipping ramp will be modified to include a trench drain to collect rinse water. Wash water collected on the ramp will drain into a trench drain which will be installed along the end of the ramp. Collected rinse water will drain back towards the railcar building and will be directed into the railcar with the tipped soil.

The heavy-duty trench drain will be Model R-4990-DA as manufactured by Neenah Foundry or approved equal. The trench drain is 12 inches wide with a ductile iron grate which is bolted to the trench frame. Refer to Appendix C for specifications on the trench drain. The trench drain will run the entire ramp width and will be recessed slightly into the concrete in order to ensure maximum collection of the wash water. The water collected will be drained via back into the railcar and absorbed by the soil prior to completing soil encapsulation with the liner. Further, the tipping hopper will be washed down and this rinse water will subsequently discharged directly into the railcar situated below.

4.2 Rail Bed Improvement

MHF will improve the rail bed within the building. The tracks will be reconstructed on a floating reinforced concrete slab. The concrete slab will facilitate the spreading of the weight of the railcar and the soil loading minimizing the amount of travel between the rail and the surrounding building floor. This stabilization will facilitate containment of materials during housekeeping operations.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

TABLES

Table 1 (Page 1 of 2)
New Jersey Hackensack Meadowlands District - Bulk Regulations

Zone	Lot Size Requirements				Bulk Regulations					Performance Standard
	Minimum Lot Area	Minimum Lot Width	Minimum Lot Depth	Minimum Lot Coverage	Minimum Open Space	Minimum Front Yard	Minimum Side Yard	Minimum Rear Yard	Floor Area Ratio (FAR)	
Required										
Intermodal A	1 acre	100 feet	150 feet	50 %	15%	30 feet	25 feet	50 feet	1.0	B
Environmental Conservation	—	—	—	—	—	—	—	—	—	A ⁽¹⁾
Light Industrial A	3 acre	200 feet	—	60 %	15%	50 feet	90 feet total, 30 feet each	75 feet	2.5	B
Most Stringent Requirement ⁽¹⁾	3 acre	200 feet	150 feet	50 %	15%	50 feet	90 feet total, 30 feet each	75 feet	1.0	A ⁽²⁾
Provided										
Plots 5A1, 5B, 7C & 8C	6.48 ac±	1065 feet±	263 feet±	2.4%	0.97%±	55 feet±	480 ft±	0 feet± ⁽³⁾	0.02±	A

Notes:

Zoning for 5800 Westside Avenue – Soil Transload Facility, County of Hudson, North Bergen, New Jersey, Block 453a, Plots 5A1, 5B, 7C and 8C: Intermodal A (IA)

- Intermodal facilities is a permitted use.
- Accessory container storage shall be permitted only in conjunction with intermodal facilities and truck terminals.
- Stacking of containers is not permitted.
- Total height of containers, inclusive of support structures, shall not exceed 15 ft. above grade level.
- All containers shall be heavily screened in accordance with N.J.A.C. 19:4-8.9

Zoning within 300 feet of property:
 Environmental Conservation (EC)
 Light Industrial – A (LI-A)

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Table 1 (Page 2 of 2)
New Jersey Hackensack Meadowlands District - Bulk Regulations

As per N.J.A.C. 19:4-7.6 (e), whenever any facility or part thereof, including storage dike, which stores, utilizes or manufactures hazardous materials, liquids and chemicals is within 300 feet from another zone, the more restrictive of the performance standards for the 2 zones shall apply.

- (1) Most stringent requirement for zones Intermodal A, Environmental Conservation (EC), and Light Industrial - A (LI-A).
- (2) Except for particulate source emissions, which shall not exceed 0.2 lbs/hour/acre of lot or New Jersey State Air Pollution Control Laws and Codes (N.J.A.C. 7:22), whichever greater.
- (3) A variance will be required.

Table 2 (Page 1 of 1)
New Jersey Hackensack Meadowlands District - Open Space Requirements

	Minimum Requirements
Front Yard Planting	1 major tree/30 linear feet of frontage plus 1 shrub/15 linear feet of frontage
Parking Plantings	1 shade tree plus 10 shrubs/3000 sf of vehicular use area - Or - 1 shade tree plus 10 shrubs/10 parking spaces <i>whichever greater</i>
Vehicular Buffer	<i>To be along all property lines, except driveways or other openings. Landscaped open strip having a 5 ft. min. width.</i> 1 shade or evergreen tree/50 linear feet plus 1 shrub/10 linear feet of vehicular buffer
Stormwater Management Planting	1 tree plus 5 shrubs/100 lf of stormwater management area edge
General Planting	1 shade tree plus 5 shrubs/1000 linear feet of open space.

Plans must be sign and sealed by NJ Certified Landscape Architect or qualified professional if greater than 20,000 ft.

FIGURES

Figure 1
Site Location